

ORDER #

RF 17692

# EG&G ROCKY FLATS



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93-RF-15692

JAN 1994  
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EG&G ROCKY FLATS, INC  
ROCKY FLATS PLANT, P O BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-700

December 23, 1993

F R Lockhart  
Director  
Environmental Restoration Division  
DOE, RFO

CHANGE TO INTERIM STATUS FOR 750 PAD - SRK-280-93

This letter is in response to the conditional "approval" granted by the Colorado Department of Health (CDH) for the change to interim status for the 750 pad allowing pond 207B sludge to be stored in tanks. In general, EG&G Rocky Flats, Inc, feels the conditions levied by CDH unreasonable, poorly defined, having no stated basis or purpose, and displays a disregard for spending limited resources in a value added and responsible manner. Attached is a point-by-point discussion of these "conditions" including the assumptions made to facilitate EG&G's rough estimate of cost and schedule impact as requested by the Department of Energy (DOE)

It appears that CDH personnel assigned to this task are inexperienced and as a result, overly cautious in this matter. CDH as well does not want to be deemed a roadblock to our expedited sludge removal efforts, therefore, this "conditional" approval. EG&G does not feel items 2 or 3 fall within the current scope of the sludge removal effort, and will not pursue them until so directed, items are properly scoped, funding requirements are estimated, source of funding is determined, and baselines changed.

Attachment II is the rough order of magnitude cost you requested. Schedule delay is estimated to be a minimum of 2-3 weeks (more should resolution of these conditions delay sludge transfer) and cost impact is estimated to be \$1,200,000. This estimate of schedule impact is based on prompt CDH response to approval requests, which is out of EG&G's control.

EG&G strongly recommends that DOE and EG&G jointly challenge CDH on this "conditional" approval, specifically items 2 and 3. To facilitate this, we have attached a draft letter for your use from DOE to CDH initiating this challenge (Attachment III).

If you have any questions regarding this issue, please contact me at extension 8541 or Joe Mellen at extension 8607.

CLASSIFICATION

ON  
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CRET

*S R Keith*

S R Keith  
Director  
Solar Pond Projects

AUTHORIZED CLASSIFIER  
SIGNATURE  
DOCUMENT CLASSIFICATION  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE

bep

Attachments  
As Stated

REPLY TO RFP CC NO

Ong and 1 cc - F R Lockhart

ITEM STATUS

PARTIAL/OPEN  
CLOSED  
APPROVALS

DC  
S Howard - DOE, RFO  
M A Witherill - " "

IG & TYPIST INITIALS

CDH CONDITIONAL APPROVAL CHANGE TO INTERIM STATUS FOR 750 PAD

- 1 A written Standard Operating Procedure (SOP) must be prepared for conducting tank inspections at the 750 Pad (Unit 25) The SOP should describe, in detail, the operation and management of the 750 pad as it applies to the tank systems

*A specific SOP can be written for this facility We will use free standing ladders/platforms to inspect the secondary containment as a compensatory action until automatic leak detection equipment is installed We can provide the procedure for the RCRA tank inspection, including the checklist Based on this scenario, this item is of some schedule impact of approximately 2-3 weeks*

- 2 The Division requires that a representative portion of the tanks be sampled after the tanks are placed into service for hazardous material storage RFP will submit a Sampling and Analysis plan to the Division for prior approval The sampling and analysis will include, at a minimum, radiation levels, specific gravity, and hazardous constituent quantities

*EG&G does not understand the purpose of this effort What will this effort accomplish? When unofficially asked this question, the CDH permit writer did not know (see record of phone conversation, page three of this attachment) This sludge has been thoroughly characterized for all aspects requested What analyte sweep is desired? Should compounds also be checked? Will the sludge change after transfer operations? The purpose of any sampling plan must be clearly stated prior to development of a sampling and analysis plan*

*It is assumed that this Sampling and Analysis Plan will need to be developed, reviewed, and approved by CDH prior to sampling, but after sludge transfer (see record of phone conversation, page four of this attachment) This entire effort is really a major cost/schedule impact and one which EG&G feels is a complete waste of resources Until CDH can justify the need for further characterization and provide a clear purpose, and scope of such an effort, it is EG&G's recommendation not to pursue such action CDH needs to be held accountable for the efforts they are requiring Where in the regulations is it justified that they need this information? Is not an independent tank certification by a registered professional engineer adequate? Do CDH personnel even have the technical capability of utilizing much of the data they have requested (such as tank seismic calculations)? It is suggested we present the characterization data to CDH again, perhaps in more detail They may re-think this condition*

- 3 Use tank material "coupons" put into the sludge or some alternate means of assessing material compatibility with the waste

*Again, this request is poorly defined and is not scoped Is every tank to have such a coupon? How often should a coupon be checked? For what should a coupon be checked? For original ASTM-1998 test (which destroys the coupon, so each tank will need numerous coupons)? Where should the coupons be placed in the vapor area, in the sludge, or at the vapor/sludge interface?*

*EG&G has provided CDH with a corrosion study which concludes the selected material is compatible with the waste streams Further analysis by EG&G personnel subsequently performed expressed the opinion that the corrosion study, while correct, utilized some extremely conservative assumptions These types of analyses should be adequate for establishing material compatibility CDH is, in the opinion of EG&G, going way overboard in this area This effort could be, at worst case, a significant cost impact Provided this program can be implemented after sludge transfer, there will be no schedule impact to sludge transfer dates*

- 4 Professional Engineer Certifications for tank system installation and integrity, and as-built drawings must be submitted to the Division prior to sludge transfer into the tank system. The Division reserves the right to inspect the tank systems prior to placing the tanks in service for hazardous material storage in accordance with Section 100 42(l)(1)(i-ii)

*This item is not a large cost impact, but is a schedule impact. The accelerated schedule and plan of operations uses incremented setting and filling of tanks, rather than preparation of an entire tent of tanks prior to filling. Also, "as-builts" are normally not required until 90 days after project acceptance and transfer. Time to produce incremental "as-builts" and for submission/approval by CDH will add time to the schedule. This schedule impact is estimated at two weeks, depending on CDH response times. EG&G/DOE joint readiness assessment should be adequate safeguards that facilities will be ready prior to sludge transfer.*

- 5 Only 207 B-pond sludge transfer and storage is conditionally approved for interim status. Management of 207C-Pond is not approved until issues concerning specific gravity sampling have been resolved. Removal of the clarifier wastes is also not approved until issues concerning waste characterization are resolved. RFP's submittal of the revised Part A is still under review.

*The procedure for checking the specific gravity of C pond is a planned activity and is therefore not an impact. The waste characterization issues regarding clarifier materials are new to EG&G, therefore, we cannot assess cost/schedule impact.*

12/21/93

Contact with CDH  
By Kathy London  
Regarding change to Interim Status for the 750 pad sludge storage

Audix message from Dave Wall (?) CDH: Would like to discuss the conditions CDH will put on our change to Interim Status. Have already talked to Schassburger. Please call Lisa Weers (692-3451).

I phoned Lisa. She provided the following:

Gary Baughman has talked to Schassburger (DOE) about this conditional approval, and she thinks Mike Freehling has also been informed. CDH is requiring a written procedure for the daily inspection of the tanks. They also want a sampling plan. I asked her what the purpose of the sampling was to be or what we should sample for. Lisa thought we would propose that, she did not have an objective to state, but CDH staff were thinking about something like sampling 10% of the tanks. I asked her what seemed to be the gap in data we have provided. They are not sure the tank is compatible. CDH will require coupons, though we can suggest an alternative. They will want the Professional Engineer's certification and as-built drawings. Lisa thinks CDH will probably want to perform an inspection, and that CDH would want to approve the certification. All this applies to B-Pond.

C-Pond and clarifier issues still need to be discussed. She says they have read the corrosion report but are still unconvinced. Lisa has also spoken to the tank vendor, and says the vendor was very helpful. CDH feels we do not have complete evidence on the lack of solvents in the waste. Especially for the clarifier, the reports she read suggest to Lisa we are less-sure of the clarifier characterization than we are of the ponds.

Lisa expects to have a couple questions on the Part A submittal. CDH is confused about the number we put on it. We think it is request #13 and Lisa only knows about requests through #3 or #4. I told her Mike Freehling could check that.

I told Lisa we were disappointed about the sampling and the coupons. We don't think they are needed. I thanked her for the call and said we'd look forward to receiving the CDH letter.

cc  
Mellen  
Mauer  
Freehling  
Howard

12/23/93

Phone Contact with CDH

By S R Keith

Regarding change to interim status, 750 Pad, tank storage, Dec 22 letter from CDH to DOE

I phoned Chris Gilbreath at (303)692-3371.

Chris and I briefly discussed "condition #2" of the referenced letter. Chris offered that the requested sampling and analysis plan did not have to be submitted or approved prior to sludge transfer. He also elaborated that CDH did not feel the existing sludge characterization was adequate in the area of organics. If we feel the characterization data is adequate in this area, it might be worthwhile for us to present the data to CDH again in a very detailed fashion. This may bring about a change to this condition.

We also briefly discussed the "condition #3" from a scoping standpoint. Chris indicated CDH did not anticipate a large scope for this "coupon" program, however admitted they had not thought out the details.

**Preliminary Assessment of Cost/Schedule Impacts  
Implementing CDH Requirement (item 2 from conditional approval) for Sampling  
Sludge Tank Contents**

**TOTAL COST IMPACT \$ 140 K**

**Scope. \$ 0 45 K**

**Estimated as 3 weeks for 1 5 FTE**

**Basis** Establish purpose and objective with CDH 2 weeks  
Past experience: one meeting to lay out questions to CDH, CDH in-house  
discussions, one meeting for them to report back their response Several  
SPP and support staff providing information and attending meetings  
CDH decision and documentation/DOE concurrence 1 week  
Past experience suggests one week is possible for CDH to issue a decision  
Several SPP and support staff answering questions, providing  
information, etc

**Modification of Work Packages, BCP. \$ 0 9 K**

**Estimated as 2 weeks for 3 FTE**

**Basis** Statisticians (2) at establish number of tanks, number of samples, trade-offs  
for numbers versus homogenized tank contents Support from SPP,  
engineering, safety disciplines as needed for trade-off evaluation  
Experience with HNUS pond characterization used to estimate

**Develop and Internal Review of Sampling Plan. \$ 1 5 K**

**Estimated as 5 weeks for 3 FTE**

**Basis** Experience with HNUS pond characterization program

**DOE Review and Transmittal to CDH. \$0 3 K**

**Estimated as 3 weeks for 1 FTE**

**Basis** Experience suggests it is possible for DOE program staff to review and comment,  
SPP to incorporate comments, and DOE to transmit from RFO program  
office level in three weeks Provided staffing to respond to comments,  
rework submittal.

**Approval to Transfer Sludge Received. milestone**

**Basis** Assumed that CDH will have pre-approved plan verbally based on interactions,  
and assumed DOE will accept CDH verbal approval and direct EG&G to  
begin sludge transfer

**No further schedule impact to sludge transfer**

**Cost impact to program:**

Note: in absence of sampling objective, assumptions must be viewed as very tentative  
Assume 20% of tanks need sampling (14 tanks)  
Assume three samples per tank  
Add 20% for field QA/QC  
Add 10% for lab QA/QC

Total number of samples =  $14 \times 3 \times 1.3 = 55$

Cost per sample	Validation	50	
	TAL metals	350	
	VOC	350	
	sp gr	30	
	rad screen		
	& shipping	170	
	Nitrates	30	
		980	
		+20% = 1176	
	Sample crew		= 400
Total sample costs			total \$1576 per sample

\$ 87 K

Interpret Data. \$ 16 K

Estimated as 2 weeks for 2 FTE

Basis: experience with HNUS data

Write Report and Submit to State. \$ 10 K

Estimated as 100 mnhours at \$100

Basis: estimated from general project experience

SUBTOTAL \$116 K

Contingency. 20% = \$ 22.6 K

TOTAL \$ 140 K

**Preliminary Assessment of Cost/Schedule Impacts  
Implementing CDH Requirement (item 3 from conditional approval) for Coupons**

**TOTAL COST IMPACT Ten Year Program: \$ 1,073 K**

**Basis/logic of estimate**

**Scope. \$ 32 K**

- Determine parameters (number of tanks, what tests to perform, where to place coupons in tanks, how often to test coupons, etc )
- Assume 20% of tanks to be tested (14 tanks)  
3 coupons/tank per year, so need 30 coupons per tank for ten year test
- Test to ASTM D1998 standard (same standard used for original material test)

**Prepare 500 coupons (for in-tank and controls) \$ 30 K**  
Procure coupons, cast/machine/coat (\$ 20 K)  
+ 100 hours EG&G labor (\$10K)

**Install Coupons. \$ 122 K**

1 RPT  
2 workers  
2 foreman/safety/rad engineering

5 FTE x 16 hrs/tank x 14 tanks x \$100 per hour

**Annual Retrieval Over Ten Years: \$ 560 K**

half the cost of installation, times ten years

**Ship/Test Coupons. \$ 100 K**

assumes \$ 200 per coupon

**Annual Report. \$ 80 K**

80 hours/year x ten years x \$100/hours

**SUBTOTAL \$ 894 K**

**Contingency. 20 % \$ 179 K**

**TOTAL \$ 1, 073 K**



DRAFT

DRAFT

DRAFT

Colorado Department of Health  
Denver, Colorado

**MODIFICATION TO INTERIM STATUS ON 750 PAD TO FACILITATE TANK STORAGE**

DOE is in receipt of your letter of December 22, 1993, granting conditional approval for POND 207B material storage in tanks on the 750 pad. Conditional items 2 and 3 are unjustified, general, not scoped adequately, and unacceptable.

DOE requests a meeting with appropriate level permitting personnel as soon as possible to resolve these issues.

Please contact \_\_\_\_\_ at your earliest opportunity so we may arrange such a meeting, resolve these issues, and proceed with emptying the remaining two solar ponds, a high CDH priority.